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EXAMINER

VARGAS, DIXOMARA

ART UNIT PAPER NUMBER

2859

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

**Office Action Summary**

Application No.

09/992,733

Applicant(s)

DAMADIAN ET AL.

Examiner

Dixomara Vargas

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 and 65-95 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-18 and 84 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 7, 9, 11, 19-31, 65-69, 79, 83, 85 and 89-94 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 8, 10, 12-15, 70-78, 80-82, 86-88 and 95 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2001 and 17 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 07/25/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 July 2005 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 19-31, 66, 67, 70-74, 78-83, 86-89 and 95 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claims 19-31, 66, 67, 70-74, 78- 83, 86-89 and 95, the word "member" is used as "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "member," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

5. Claim 76 recites the limitation "the telescoping member" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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6. Claims 90-94 recites the limitation "the body portion", for example claim 90 in line 2.

There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-3, 6-7, 9, 11, 65 and 85 are rejected under 35 U.S.C. 102(e) as being anticipated by Sen (US 6,366,086 B1).

With respect to claim 1, Sen discloses a test fixture for use in a magnetic resonance imaging system, comprising (Figures 1 and 2): a body portion having a first longitudinal axis along a first direction (tool #30); a first coil supported by the body portion, the first coil being wound around a second longitudinal axis (coil A), the second longitudinal axis being along the first direction, a longitudinal member connected to the body portion (core #120 supporting the coils), the longitudinal member having a third longitudinal axis along a second direction transverse to the first direction, a second coil supported by the longitudinal member (coil B or coil C), the second coil being wound around a fourth axis along a third direction transverse to first direction (Figure 1 showing coils A, B and C in the three orthogonal directions), and a

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container to contain a test substance, the container being supported by the longitudinal member adjacent to the second coil (cannel #32 to carry the borehole fluid to be examined).

9. With respect to claim 2, Sen discloses the first coil is wound around the body portion, perpendicular to the first longitudinal axis (coils A, B and C are in a perpendicular configuration with respect to each other and hold by a core).

10. With respect to claim 3, Sen discloses the test substance being chosen from the group consisting of petroleum jelly, water, salt water and nickel chloride (Column 5, lines 43-44, wherein the test substance is mud, which is a combination of water and solids in the borehole).

11. With respect to claim 6, Sen discloses the container is within a region defined by the second coil (Figure 2).

12. With respect to claim 7, Sen discloses the second coil is a transceiver (Column 3, lines 23-25).

13. With respect to claim 9, Sen discloses the first coil is a receiver coil (Column 3, lines 23-25; coils A-C are capable for transmitting and receiving).

14. With respect to claim 11, Sen discloses electrical connections for coupling the first and second coils to circuitry external to the test fixture (Figure 1, #33 cable connects the tool #30 with equipment #7 on the surface and external from the tool).

15. With respect to claim 65, Sen discloses the first coil is wound perpendicular to the first longitudinal axis (Figure 1, shows coils A, B and C perpendicular to each other and wound around the core #38).

16. With respect to claim 85, Sen discloses the first and second longitudinal axes are the same (Figure 1).

17. Claims 19-31, 66, 67 and 89 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferut et al. (US 5,432,449 A).

With respect to claims 19 and 66, Ferut discloses a body portion (Figure 1 and 4, #50) having a longitudinal axis and first and second ends along the longitudinal axis (Figure 1, #51), at least one of the first and second ends (top and bottom of #50) being adapted to be connected to a magnetic resonance imaging system (Column 3, lines 67-68); a member having a first end connected to the body portion and a second end distanced from the body portion (mounting plate #54 in Figure 4 which receives bottom of #52); and a coil supported by the member (coil #64 supported by #54 and #52).

18. With respect to claim 20, Ferut discloses the coil is supported by the member proximate the second end of the member (Figure 4, #54 proximate to bottom of #52).

19. With respect to claims 21 and 67, Ferut discloses a container (Figure 4, #55) supported by the member, proximate the coil (Figure 5, #64); and a test substance with the container, the test substance being capable of emitting a magnetic resonance signal (Column 4, lines 34-36).

20. With respect to claim 22, Ferut discloses the container is within a coil (Figure 4).

21. With respect to claim 23, Ferut discloses the test substance is chosen from the group consisting of petroleum jelly, water, salt water and nickel chloride (Column 4, lines 34-36).

22. With respect to claim 24, Ferut discloses the member is pivotally connected to the body portion (Figure 4, member #52 connected to #54).

23. With respect to claim 25, Ferut discloses a second coil wound around the body portion (Figure 4, multiple coil structures in arrangement #52).

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24. With respect to claim 26, Ferut discloses the body portion comprises first and second members, the first member defining an opening for slidably receiving at least a portion of the second member (Figure 4, multiple coil structures in arrangement #52).

25. With respect to claim 27, Ferut discloses wherein the coil is wound around the first member (Figure 5).

26. With respect to claims 28 and 89, Ferut discloses a test fixture for use in a MRI system comprising a body portion (Figure 4, #54) comprising a first member and a second member (multiple members #52), defining an opening for slidably receiving at least a portion of the first member, such that the first and second members may be moved with respect to each other to adjust the length of the body portion (each member #52 may be moved to be located in the top of each other on the top opening); and a coil supported by the body portion (Figure 5, #64).

27. With respect to claim 29, Ferut discloses wherein the first and second members are longitudinal members (#52); and the coil is wound around the first longitudinal member (figure 5, coil #64).

28. With respect to claim 30, Ferut discloses a third longitudinal member connected to the body portion (multiple elements #52), and a second coil supported by the third longitudinal member (coils #64 inside each member #52).

29. With respect to claim 31, Ferut discloses a container (Figure 4, #55) by a third longitudinal member, within the second coil (each member #52 has a coil #64 with a container #55); and a test substance within the container, the test substance being capable of emitting a MR signal (Column 4, lines 34-47).

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30. Claims 79 and 83 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacobson (US 5,432,449 A).

With respect to claims 79 and 83, Jacobson discloses a test fixture for use in MRI system comprising (Figure 1): a base comprising a first and second telescoping members (members #31 and #33 in structure #11); the base being extendable from a first length to a second length by extending at least one of the telescoping members with respect to each other (extending #31 from section #33 and also extending #33 from section #57 or extending #57 from section #55); a first coil supported by the base (coils #13); a longitudinal member pivotally connected to the base (member #17 connected to base #11); a second coil supported by the member (coils #13); wherein the member is rotatable from a first position to a second position (#17 can be rotated through adjustment mount #21).

31. Claims 68, 69 and 90-94 are rejected under 35 U.S.C. 102(e) as being anticipated by Hinks et al. (US 6,492,815 B2).

With respect to claim 68, Hinks discloses a test fixture comprising (Figure 1): a base having an axis (#27); a first coil coupled to the base in a first orientation with respect to the axis; and a second coil coupled to the base in the second orientation different from the first orientation, with respect to the axis (induction coils #24 and RF coil #26 located at orthogonal orientation from each other); wherein the fixture is adapted to be connected to an MRI system (Column 2, lines 15-58).



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32. With respect to claim 69, Hinks discloses the first coil is wound around a second axis, the second axis being along a first direction; and the second coil is wound around a third axis, the third axis being along a different direction than the second axis (Figure 1).

33. With respect to claims 90-94, Hinks discloses a portion of the body portion (considered to be a part of the frame #27, for example, the orthogonal sections) is adapted to be mechanically connected to the MRI system (Column 2, lines 15-58; Figure 1).

***Allowable Subject Matter***

34. Claims 16-18 and 84 are allowed.

35. The following is an examiner's statement of reasons for allowance:

a. With respect to claim 16, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture for use in a magnetic resonance imaging system, comprising a longitudinally extending body portion comprising a third longitudinal member having a second longitudinal axis and being rotatable between a first position wherein the second longitudinal axis is parallel to the first longitudinal axis and a second position wherein the second longitudinal axis is perpendicular to the first longitudinal axis in combination with the remaining limitations of the claim.

b. With respect to claims 17, 18 and 84, the claims have been found allowable due to its dependency on claim 16 above.

36. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

37. Claims 70-74, 76, 78, 80-82, 86-88 and 95 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

38. Claims 4-5, 8, 10, 12-15, 70-78, 80-82, 86-88 and 95 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

39. The following is a statement of reasons for the indication of allowable subject matter:

c. With respect to claim 4, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture for use in a MRI system comprising a longitudinal member pivotally connected to the body portion about an axis perpendicular to the first longitudinal axis of the body portion in combination with the remaining limitations of the claim 1 above.

d. With respect to claim 5, the claim has been found allowable due to its dependency on claims 1 and 4 above.

e. With respect to claim 8, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture for use in a MRI system comprising a pivotable connector connected to an end of the body portion, the pivotable connector having an axis of rotation perpendicular to the first longitudinal axis; the pivotable connector being adapted to be connected proximate a pole

of a magnetic resonance imaging magnet in combination with the remaining limitations of the claim 1 above.

f. With respect to claim 10, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture for use in a MRI system comprising a body portion that has a recessed section; and the first coil is wound around the recessed section in combination with the remaining limitations of the claim 1 above.

g. With respect to claim 12, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture for use in a MRI system comprising a body portion that has an adjustable length in combination with the remaining limitations of the claim 1 above.

h. With respect to claims 13 and 14, the claim has been found allowable due to its dependency on claim 12 above.

i. With respect to claim 15, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture for use in a MRI system comprising the body portion has an adjustable length; the longitudinal member is pivotally connected to the body portion; and the test fixture has a first, undeployed position, wherein the body portion has a first length and the second longitudinal axis of the longitudinal member is positioned along the first direction, and a second, deployed position, wherein a length of the body portion is increased from the first length to a second length and the second longitudinal axis is positioned along the second direction transverse to the first longitudinal axis; and wherein the fourth axis of the

second coil is positioned along the second direction when the longitudinal member is in the second position in combination with the remaining limitations of the claim 1 above.

j. With respect to claim 70, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture comprising a member coupled to the base; wherein the second coil is coupled to the member in combination with the remaining limitations of claims 68 and 69.

k. With respect to claim 71-74, 78 and 86, the claim has been found allowable due to its dependency on claim 70 above.

l. With respect to claim 75, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture comprising a base comprising a first and second telescoping members, and the first coil is supported in the one of the telescoping members in combination with the remaining limitations of claim 68 above

m. With respect to claim 76, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture comprising telescoping member that comprises first and second longitudinal members; and the second longitudinal member defines a longitudinal opening for receiving the first longitudinal member such that at least one of the first and second longitudinal members may be moved with respect to the other to vary the length of the test fixture in combination with the remaining limitations of the claim 68 above.

n. With respect to claim 77, the claim has been found allowable due to its dependency on claim 75 above.

o. With respect to claim 80, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture for use in a MRI system comprising a first coil is wound around a first longitudinal axis along a first direction; the second coil is wound around a second longitudinal axis; and rotation of the member positions the second longitudinal axis of the second coil along a direction transverse to the first direction in combination with the remaining limitations of the claim 79 above.

p. With respect to claims 81-82, the claim has been found allowable due to its dependency on claim 80 above.

q. With respect to claim 87, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture for use in a MRI system comprising a first portion of the body portion is adapted to be mechanically connected to the MRI system; and a second portion of the body portion is adapted to be electrically connected to the MRI system in combination with the remaining limitations of the claim 28 above.

r. With respect to claim 88, the claim has been found allowable due to its dependency on claim 87 above.

s. With respect to claim 95, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a test fixture for use in a MRI system comprising a first portion of the body portion is adapted to be mechanically connected to the MRI system; and a second portion of the body portion is

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adapted to be electrically connected to the MRI system in combination with the remaining limitations of the claim 19 above.

### ***Response to Arguments***

40. Applicant's arguments with respect to claims 1-31 and 65-95 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252. The examiner can normally be reached on Monday to Thursday from 8:00 am. to 4:30 pm..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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October 27, 2005



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